

REMARKS

Reconsideration and allowance are respectfully requested.

New drawings consisting of figures 3, 4 and 5 are submitted here with. It is submitted that the material in these drawings is fully supported by the original specification. For example, the barrel shape of the gate member 14 is evident from Figure 2 as originally filed. The fact that this element is hollow is clearly supported in the original specification at page 6, first full paragraph and is now shown in new Fig. 3. Also, it is believed evident that the gate component 12 has a major axis from Figure 2 and is now shown in this figure. It is also believed evident that the gate member 14 is in alignment with that axis. With respect to the shaped end of the gate member and the reciprocal shape of the opening, it is submitted that Figure 2 as filed clearly shows a flat end for engagement with a flat surface surrounding the opening 15. It is submitted that this is adequate to support the claims as originally presented. Claim 15 is believed adequately supported in the specification and Figure 2. The specification at page 5, lines 1-22 simply discloses that the member 14 is compliant. This simply means that it is formable and compressible against the opening. Claims 12 and 17, which is directed to the opening being radially presented have been canceled.

In Office action, all of the claims presented have been rejected as either anticipated or as obvious in view of the patent to Gifford No. 3, 719, 322 and UK No. 2354290. Weiland, Newell, Flagg and Alvarado are combined with Gifford against several of the dependent claims. In response, claim 1 has been amended to incorporate the limitations of original claim 2 and a portion of the limitations of original claim 7. As now defined in amended claim 1, the present invention provides a gating arrangement which incorporates a displacement bias in the form of an expansion lag prior to the gate allowing passage of coolant airflow. This results from the fact that as the temperature increases, the gate

member will expand that less than the gate component such that some cooling air will enter the bore or chamber for circulation with the component or member being cooled. The rate of coolant airflow will be dependent upon the temperature of the coolant air which will have the beneficial effect of inhibiting undesirable expansion of the gate member and will also affect the external boundary temperature and conditions which initially act upon the gate component before the gate member is influenced. The adjustable feature for the gate member allows increase or decrease of the displacement bias for the gate member and thus a degree of cooling will occur to a desired level commensurate with engine conditions. This will have the desirable effect of increasing overall efficiency of the engine for its various operating conditions.

In the arrangement of the Gifford patent, the gate member includes a core member 20 housed within a casing 16. The position of the core member 20 does not appear to be adjustable in any sense and particularly to provide an adjustable displacement bias to accommodate different operating conditions for the machine with which the valve assembly is to be associated. Thus, no lag time is available in this reference or the unapplied references which are combined with Gifford No. 3,696,997. Thus, if the valve disclosed in Gifford '322 were to close below a specific temperature than the flow of either air or fuel would be interrupted obviously creating difficulties for any machinery downstream of the gate component. Also, it does not appear possible to cause compression of the gate member into the gate component which is understandable since the reference discloses machinery in a carburetor so that the valve must be open at all times for machinery operation.

The British patent No. 2354290 uses shape memory material in valves which appear to be continuously open in all the arrangements, particularly Figures 5 and 6, where the bent plates simply substantially block the cooling air flow. There is no adjustability provided in any arrangement for affording a

displacement bias which must be overcome before a flow of coolant through the opening is possible. Thus, this reference adds nothing to the Gifford structure in terms of adjustability.

The citation of Gifford with several of the secondary references is acknowledged but it is believed that the amendment of claim 1 as discussed above renders this claim and its dependent claims patentable by virtue of their dependence.

An early and favorable action is solicited and is believed warranted.

Respectfully submitted,

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